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The problem of creative education in information society

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Abstract

Individuals in an information society are expected to be active and far-sighted, to know and express themselves well, and to have a creative origin that can utilize environmental facilities and technology to the best extent. These wishes result in questioning educational systems and making innovations in teacher training and education programmes. The teachers and administrators that are going to realize the new understanding have to know themselves what creativity is and how to enhance it (Rıza, 1999). In this study, it was tried to learn the perceptions of administrators and teachers as to the concept of creativity and their ideas on enhancing creativity. Original data has been collected with validity and reliability checked data collect instrument improved by Dündar 2003. Original data has analyzed with using statistical methods.

Keywords: Informatics; information society; creativity; creative education; creative teacher.

1. Introduction

The information society can be defined as a phase of development in which information sector, information production, information capital, and qualified human factor have gained importance through introduction of new technologies and the continuity of education has come into prominence. These developments lead to the emergence of new behavior types and carry the society beyond customs and centralization. This understanding deals with time, place, reason, and causality, develops its unique structures, and causes the principles of future politics to emerge according to itself (Alvin & Heidi, 1995).

One of the most important infrastructures of information society is education. Education takes training creative and innovative people as the main purpose (Erdoğan, 2000). In creativity, which can be described as regeneration and construction, and it must include novelty, freshness, and originality. Significance and beneficialness may be added to these features (Emanuel, 1984). Creative individuals have such distinct characteristics as being ready to learn, being curious, free and flexible in thinking, curious, being able to use his/her creativity, producing new ideas,

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and being willing about novelty (İnci, 1979, Friedrich,1979). The best education is obtained through creative education (Beetlestone, 1998). Creativity education makes individuals benefit from opportunities they encounter, find new solutions to overcome difficulties they face, question the things around them and make predictions, improve their imagination, and develop personalities with self-confidence and independence (Şule, 1991, Şaila&Sibel, 1992). Creativity takes place in an environment in which authentic thinking and innovativeness is encouraged and awakened (Robinson, 2003).

School has a culture that is open to scientific developments and novelty, that appreciates human resources, and that helps individual carry out the self. The education programmes applied in this culture has to include goals, contents, and teaching process that will meet students' learning educational needs (Wiles&Bondi, 2007). The school of information society must constantly keep itself open to new improvements. The first issue to be dealt with by education administrators in transition to information society about transformation/improvement of school administration should be "school culture". An organizational culture should be built at school that is open to individual development and innovations, that appreciates human resources, and that helps individual carry out the self. Success in education and teaching depends to a great degree on teacher behaviours (Cay, 1966). It can also be said that traditional concepts about the teacher has changed in information society. Teacher must understand and interpret information society. Teachers have to adopt the characteristics of information society and its investigative and creative values and behaviours. If the students can perform critical thinking that concentrates on problem solving and have a communicative structure, their creativity may improve (Starco, 2000). According to Titiz, training individuals that suit the profile of information society human requires more advanced cognitive processes (Titiz, 1996). In information society's understanding of teaching, student-centered teaching model is adopted. It is essential that information is reproduced by the student and information is made more meaningful. Information can be more meaningful if students search find and organize all by themselves. Asynchronous teaching system which does not rely on time and place is adopted (Merter, 2002). Students are taught how to obtain information, how to classify and encode information, and how to produce new information (Rainfort&Kugelmass, 2005).

1.1 The Purpose of the study

The human type that information society requires is the human that carries out the self that is creative, initiative, and productive. Creativity of individuals is important in information society. Creativity turns into inventions, and inventions turn into technology and production. The institution that will train individuals has a great value in information society requires is the institution of education. For the institution of education to manage this, administrators and teachers have to have detailed information about what creativity is and how to improve it. The purpose of this study, which was carried out as an example, is to draw attention to the topic in line with the findings of the study and to enable development in creative education.

1.2 Problem statement

The problem of the study consists of perceiving the concept of creativity of school administrators and teachers and depicting their views about "enhancing the creativity" on the problem of creative education in information society (Dündar, 2003).

1.3 Method and analysis of data

The study is a descriptive one in scanning type. It is an evaluation-based study in terms of the aim, and a quantitative one in terms of analysis techniques. The research data was obtained through a data collection tool developed for this purpose. The Cronbach Alpha reliability coefficient of the data collection tool has been found as .80. The items in the data collection tool were evaluated using a 5 point likert style scale (1.00-1.79 Never agree. 1.80-2.59 Not agree. 2.60-3.39 Indecisive. 3.40-4.19 Agree. 4.20-5.00 Totally agree.). The research universe consists of primary school administrators and teachers working in Kırıkkale city center. The sampling of the research involves 57 school administrators and 202 teachers chosen randomly from the universe. The findings of the research were explained through such statistics as frequency (f), percent (%), arithmetic average ($\overline{X}$), and Standard deviation (Ss). T-test has been used in comparisons.

2. Findings

202 teachers and 57 primary school administrators participated in this study, which has been conducted to determine the perceptions of administrators and teachers working at primary schools about the concept of creativity and their views related to enhancing the student creativity. 46% of the participants are female and 54% are male. It was found that most of the participants have at least 21 years in service and also they are at the age of 41 and above. The following (Table 1,2) are the t-test results showing the differences between administrators' and teachers' perceptions of the concept of "creativity" and their views on "enhancing the creativity" in respect to the total arithmetic average values.

Table 1. The t-test Results for the Difference between Administrators' and Teachers' Views on the Concept of Creativity

	GROUP	N	$\bar{X}$	s	sd	t	p
The Concept of Creativity	Teacher	202	69.02	6.58	257	4.54	.00
	Administrator	57	64.59	6.18			

*P< .05

As it can be seen in Table 1, it was found that there are meaningful differences between the views of administrators and teachers working at primary schools related to the concept of "creativity" in respect to the total averages (t= 4.54 , p< .00). This difference is in favor of the teachers ($\bar{X}$ = 69,02) when compared to the administrators ($\bar{X}$ = 64,59). In other words, teachers know the characteristics and concepts of creativity better than administrators.

It was tested (by t-test) whether there is a difference between administrators' and teachers' perceptions of the concept of creativity. Only the important findings are listed below.

Generally, it is seen that administrators and teachers' views on the concept of "creativity" differ statistically except for a few items. Though there are meaningful differences between administrators and teachers ($\bar{X}$ =3.07), ($\bar{X}$ =3.64). it is eye-catching that teachers agree with the notion "creativity is usually an innate characteristic" ($\bar{X}$ =3.64). Again, it is seen based on the data that administrators and teachers agree with the notions "There is need for creative people from all parts of the society in social development" ($\bar{X}$ =4.13), ($\bar{X}$ =4.52) and "Creative education is needed in the process of education" ($\bar{X}$ =4.18), ($\bar{X}$ =4.31) with a high percentage. Teachers state that they know "the characteristics of creative personality" ($\bar{X}$ =3.57). Administrators indecisive ($\bar{X}$ =3.29) about this idea. Hoy found in his studies in 2001 that there are considerably positive relations between imagination and creativity (Hoy, 2001). Administrators and teachers' percentage of agreement with the item "I believe that imagining enhances creativity" ($\bar{X}$ =3.81), ($\bar{X}$ =4.00) also denote that their beliefs about creativity are in line with the literature. It is possible to see findings in the literature which claim that there is not a strong relation between intelligence and creativity and even that creativity gets weaker as the level of intelligence gets higher. Administrators and teachers gave indecisive opinions for items "Some people have creative characteristics in society" ($\bar{X}$ =2.74), ($\bar{X}$ =3.34) and "More intelligent people are more creative" ($\bar{X}$ =2.86), ($\bar{X}$ =3.36). There were meaningful differences found related to this item between groups participating in the research. Administrators and teachers were indecisive about this idea, yet it is understood that teachers showed more positive agreement.

Table 2. The t-test Results for the Difference between Administrators' and Teachers' Views on Enhancing the Creativity in Education

	GROUP	N	$\bar{X}$	s	sd	t	p
Enhancing the Creativity in Education	Teacher	201	37.37	6.49	257	3.15	.00
	Administrator	57	34.35	5.92			

*P< .05

As it can be seen in Table 2, it was found that there are meaningful differences between the views of administrators and teachers related to enhancing the creativity in education in respect to the total averages (t= 3, 15, p< .00). This difference is in favor of the teachers ($\overline{X}$ = 57.37) when compared to the administrators ($\overline{X}$ =54.35). In another word, teachers know the characteristics and concepts of creativity better than administrators.

The difference between the administrators' and teachers' views on "enhancing the creativity" was tested (by t-test) for each item. Only the important findings are listed below.

As a result of the analysis, it was seen that both groups were indecisive about the item "I know the teaching methods that help enhance creativity" ($\overline{X}$ =3.74), ($\overline{X}$ =3.35). Moreover, meaningful differences were found between administrators' and teachers' views on the items showing the relations between "teaching methods that help enhance creativity" and "imagination". This difference is in favor of the teachers. In another saying, teachers believe more that teaching methods for enhancing creativity and imagination influence student's creativity.

The teachers' and administrators' views on the item "education based on memorizing impedes student creativity" are on the level of "I totally agree" ($\overline{X}$ =4.19), ($\overline{X}$ =3.91). Teachers are indecisive about the items "teachers are informed about enhancing the creativity" ($\overline{X}$ =3.35), "teachers apply techniques to enhance creativity in classrooms" ($\overline{X}$ =3.12) and "teachers believe in the necessity of imagination" ($\overline{X}$ =2.92). Administrators are agree about the items ($\overline{X}$ =3.71), ($\overline{X}$ =3.54), ($\overline{X}$ =3.40). It is understood that these differences are in favor of the teachers. When the items in the data collection tool are studied, it can be seen that teachers' views differ meaningfully from those of administrators in items related to teaching activities. It can be said that this is because teachers are the operator in classroom.

3. Conclusion

When the data obtained from the study are evaluated from a general perspective, it is found that there are statistically meaningful differences between the views of primary school administrators and teachers on the concept of creativity and enhancing creativity in education. Administrators and teachers individually believe in the necessity of enhancing the student creativity at primary schools. They state that it is essential that necessary conditions be set for teaching creativity. Teachers are indecisive that they know teaching techniques that enhance creativity. As a result, all administrators and teachers agree with the necessity of an in-service training seminar about enhancing creativity in education.

Teachers should encourage their students to be creative, criticize them in positive ways, and abandon the type of education that is based on memorization. Agarwal says in his article "Creativity in Education" (2002) that teachers have to help students interpret their syllabus, it is quite important that classes be conducted with multimedia and with the active participation of each student, and that it is necessary that teachers constantly improve themselves , and it is emphasized that creativity improves questioning skills in individual (Agarwal, 2001). Syllabuses in education should be prepared in a fluent and easily understandable way and in a way that improves student creativity. Atkıncı (2001), "The Influences Of Primary Education First Grade Syllabuses On Enhancement Of Creative Thinking", supports this idea (Atkıncı, 2001). Sungur (1998) found in his study "The Effectiveness of Creative Problem Solving Programme" that when students are sufficiently motivated in suitable environments and when they feel that they are psychologically safe, they can describe the problems related to themselves and their surroundings, can express unique solutions for problems on emotional and cognitive dimensions, and thus they can bring up their creative powers (Sungur, 1997). Imagination is quite an important characteristic for creativity. Teachers should be aware of this and believe in the necessity of imagination for creativity. Hoy supports the idea that imagination is an important factor and a feature that must not be limited in order that creativity emerges and enhances in his/her study "Imagination and Creativity in Education" (2002) (Hoy, 2001), The learning environment should be set in a way that will support students' personality development. In Öncü (1989), meaningful relations were found between personality and creativity through Torrance Creative Thinking Tests and Wartegg-Biedma personality test (Öncü, 1989).

Jausovec (2000) studied the difference between cognitive methods related to creativity and intelligence. It was found that mental activities are less related to higher intelligence or higher creativity. It was also concluded creative performance can be revealed by mixing different brain activities by different ways (Jausovec, 2000). Hattie and Rogers (1986:482) say that there are writers who say that the ability of creativity is separate from intelligence and

these can be measured. Hattie and Rogers also state that it was Wallach and Kogan (1965) who pointed out a critical turning point in literature related to creativity and intelligence (Cited in Dikici, 2002)(Hattie&Rogers, 1986).

School administrators should encourage their teachers to improve student creativity and to use multimedia in their lessons. In-service training seminars should be planned for school administrators and teachers about enhancing creativity in education, and the administrators and teachers should be encouraged to attend those seminars.

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